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Gabriel Costa De Oliveira

Software Engineer

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Graduated in Software Engineering from one of the **top universities in the Latin America**, with **over a year of professional experience** as a data scientist and backend developer. Furthermore, I've been awarded in several competitive programming contests, which demonstrates my **strong analytical skills to solve complex problems**.

EDUCATION

Bachelor's in Software Engineering,
University of Brasília (UnB)

january 2019 — August 2025

The University of Brasília (UnB) stands out in the 2025 CWUR ranking, placing among the **top 3.9% worldwide**. *See more.*

RECENT WORK EXPERIENCE

AI.lab UnB

January 2024 — July 2025
Brasília, DF

Work on the high-impact Osiris Project, resulting from an **investment of \$700,000 USD**, developing AI applications to streamline workflows for **judges and prosecutors** in tax enforcement. Held dual roles as Data Scientist and Backend Developer.

Backend Developer
August 2024 — July 2025

- Develop APIs and AI services to integrate machine learning models aimed at improving the work of judges and prosecutors in tax enforcement.
- Deploy models to production using **FastAPI**, **Docker** containers, and **MLOps** practices.
- Implement unit and integration tests using **Pytest**.
- Apply **parallel and distributed** programming techniques to achieve a **5x reduction in processing time**.
- Create new modules following a **microservices** architecture.

Data Scientist
January 2024 — August 2024

- Used **MLflow** for versioning and developing **pipelines for AI** models.
- Utilized **MLflow** for model **performance analysis** and testing different hypotheses.
- Implemented efficient pipelines for preprocessing (data mining, cleaning, and augmentation), vectorization, and storage of textual data.
- Leveraged LLMs such as **Llama 3**, along with **RAG** techniques and **NLP** for legal text classification.
- Developed and deployed highly accurate (**90%**) classification models for legal documents,
- Applied **Machine Learning** (scikit-learn) and **Deep Learning** (PyTorch, TensorFlow).

University of Brasília

Data structures & Algorithms teaching assistant

March 2022 — August 2022
Brasília, DF

Enhanced expertise in algorithms while developing technical communication skills:

- Greedy algorithms
- Dynamic Programming
- Tree structures

- Graph theory
- Complexity analysis (Big-O)

SKILLS

Languages	C, C++, Java, Python & SQL
Tools	Git, Linux, Sklearn, NLTK, TensorFlow, Hadoop, Pytorch, PySpark, mariaDB, MongoDB, MySql, SQLite3, FastAPI, SQLAlchemy, Numpy, SymPy, Pandas, matplotlib & pytest
DevOps & QA	CI/CD Pipelines, SonarQube, Unit Testing, Integration Testing, Docker & Kubernetes
Software Engineering	Design Patterns, SOLID Principles, Clean Code, Relational Database Modeling, Messaging Systems, Parallel & Distributed Programming & Microservices
Methodologies	Agile (Scrum, Kanban, XP) & TDD (Test-Driven Development)
Communication	Portuguese (Native) & English (C1)

CERTIFICATIONS, AWARDS AND HONORS

I possess not only **advanced knowledge in data structures and algorithms** but also a strong analytical ability to solve complex problems. These skills led me to the **ICPC Brazilian Programming Finals** in 2023 and a top placement in IEEEExtreme 17.0. Additionally, these competitions were instrumental in solidifying my **Python and C++** expertise.

<i>ICPC South America Brazil Finals — Honorable Mention</i>	2023
<i>ICPC South America-Brazil First Phase — Qualified for the Brazilian Finals, 66th Place</i>	2023
<i>IEEEExtreme 17.0 — 4th Best Brazilian Team, ranking among the top 14% globally</i>	2023